Case Report
Friction Injury

NovoSorb® BTM
Biodegradable Temporising Matrix

Surgeon Dr Jason Brown and Dr Elizabeth Vujcich
Location Royal Brisbane and Women's Hospital, QLD, Australia

Reconstruction over exposed muscle and tendon. NovoSorb BTM® was retained even when an infection developed during integration.

The patient sustained a lower extremity friction injury from a motorbike tyre. NovoSorb BTM was used to provide robust coverage of the exposed muscle and tendon to preserve function and improve aesthetics. During integration, an infection occurred which was successfully treated without the removal or replacement of NovoSorb BTM. The outcome resulted in good contour with excellent function, allowing the patient to return to normal activities with no residual impact.

Figure 1: Presentation of friction injury to right lower extremity.

Figure 2: Debrided wound with exposed muscle and tendon.

Figure 3: 7 days post NovoSorb BTM application; early integration progress.

Figure 4: 28 days post NovoSorb BTM application; sealing membrane delaminated revealing a robust neodermis.

Figure 5: 7 days post graft; successful graft take.

Figure 6: 4 months post NovoSorb BTM application.

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Background

A 45-year-old female was involved in an accident where a motorbike tyre caused a deep friction injury to her right calf and ankle (Fig. 1). Despite the skin being intact, it was non-viable for salvaging and primary closure. The patient had no known comorbidities.

Upon presentation, staged debridement was performed leaving an exposed gastrocnemius muscle and achilles tendon (Fig. 2). Reconstruction with a split thickness skin graft alone was considered. This was ultimately rejected in favour of initial reconstruction with NovoSorb BTM and delayed definitive closure with a split thickness skin graft to offer a more aesthetic and functional outcome.

Treatment

Following staged debridement, the wound was treated with topical negative pressure wound therapy (NPWT). At day 6 post injury, NovoSorb BTM was applied and affixed with staples to ensure good apposition to the concave wound. Outer dressings consisted of a silver dressing interface, with topical NPWT for the first 10 days. Subsequent dressings consisted of a silver dressing and a moon boot.

At day 7 post NovoSorb BTM application, the patient began physical therapy with mobilisation in a moon boot (Fig. 3). During integration, pain and discomfort were noted in the heel, which was resolved by removing a staple. Redness and pain from an infection were observed at day 10 post NovoSorb BTM application. The infection was successfully treated with intravenous antibiotics without the need for removal or replacement of NovoSorb BTM.

At 28 days post NovoSorb BTM application, the patient returned to the operating theatre for delamination of NovoSorb BTM's sealing membrane and definitive closure with a split thickness skin graft (Fig. 4).

Outcome

Graft check at day 7 revealed 100% take (Fig. 5). The outcome resulted in good contour with excellent function. At 4 months following the injury, the patient has returned to normal activities, with no residual impact on function or quality of life (Fig. 6).

NovoSorb BTM is designed to temporise the wound and facilitate the construction of a vascularised neodermis, ready for definitive closure.
NovoSorb BTM is indicated for full or deep partial thickness burns and wounds, surgical and reconstructive wounds and traumatic wounds.
For full device details, including indications, contraindications, warnings and precautions, refer to the Instructions For Use, available at **polynovo.com**

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